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Differentiating responsibilities for climate change adaptation

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Abstract: In the Cancun Adaptation Framework (CAF), the parties to the United Framework Convention on Climate Change (UNFCCC) agreed “that adaptation is a challenge faced by all Parties, and that enhanced action and international cooperation is urgently required to enable and support the implementation of adaptation actions aimed at reducing vulnerability and building resilience in developing country Parties [...]” Furthermore, the conference of the parties (COP) requests the developed countries to provide developing countries with additional finance, technology, and capacity-building. This paper argues that this decision tends to oversimplify matters because it seems to differentiate responsibilities for climate change adaptation according to differences in the contribution to anthropogenic climate change only. However, the differentiation of responsibilities for climate change adaptation is more complex than it first appears to be. To show why the differentiation of responsibilities for climate change adaptation is more complex, this paper analyzes the aspects of responsibility as a fourfold concept. Someone (i. the subject of responsibility) is always responsible for something (ii. the object of responsibility), answerable to some institution (iii.), and held accountable to a norm (iv.). The paper argues, first, that the appropriate object of responsibility in climate change adaptation is the burdens to be shared for effective and efficient adaptation. Second, for such adaptation to occur, however, subjects of responsibility should not only be developed countries. If appropriate competence and decision-structures are given in developing countries, these countries should also be deemed responsible for their own adaptation. Third, the paper shows that those vulnerable to the adverse effects of climate change should decide on their own what adaptation measures they wish to take. Fourth, the argument of this paper suggests that ability-to-pay principles are the most appropriate norms by which to blame countries for failing their responsibilities in climate change adaptation.

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Differentiating Responsibilities for Climate Change Adaptation

In the Cancun Adaptation Framework (CAF), the parties to the United Framework Convention on Climate Change (UNFCCC) agreed “that adaptation is a challenge faced by all Parties, and that enhanced action and international cooperation is urgently required to enable and support the implementation of adaptation actions aimed at reducing vulnerability and building resilience in developing country Parties [...]”.¹ Furthermore, the conference of the parties (COP) requests the developed countries to provide developing countries with additional finance, technology, and capacity-building.² This paper argues that this decision tends to oversimplify matters because it seems to differentiate responsibilities for climate change adaptation according to differences in the contribution to anthropogenic climate change only. However, the differentiation of responsibilities for climate change adaptation is more complex than it first appears to be.

To show why the differentiation of responsibilities for climate change adaptation is more complex, this paper analyzes the aspects of responsibility as a fourfold concept.³ Someone (i. the subject of responsibility) is always responsible for something (ii. the object of responsibility), answerable to some institution (iii.), and held accountable to a norm (iv.). The paper argues, first, that the appropriate object of responsibility in climate change adaptation is the burdens to be shared for effective and efficient adaptation. Second, for such adaptation to occur, however, subjects of responsibility should not only be developed countries. If appropriate competence and decision-structures are given in developing countries, these countries should also be deemed responsible for their own adaptation. Third, the paper shows that those vulnerable to the adverse effects of climate change should decide on their own what adaptation measures they wish to take. Fourth, the argument of this paper suggests that ability-to-pay principles are the most appropriate norms by which to blame countries for failing their responsibilities in climate change adaptation.

1. What Is the Object of Responsibility for Adaptation?

The CAF invites all parties to foster action on adaptation by “taking into account their common but differentiated responsibilities and respective capabilities [...]”.⁴ This invitation does not define how responsibilities for adaptation have to be differentiated. But it says that

differentiating responsibilities for adaptation should take into account that not all parties are equally capable of taking responsibility for adaptation. The CAF suggests that developed countries subsidize adaptation in developing countries. From an ethical point of view, however, it is not clear why this decision is justified and to what extent differentiating responsibilities for adaptation with regard to financial support is appropriate.

One widely recognized principle justifying the responsibility of developed countries to subsidize assistance for adaptation holds that developed countries currently contribute and have historically contributed more to climate change than developing countries. According to this so-called polluter-pays principle, developed countries are responsible for their past and current emissions. Since these emissions cause the adverse effects of climate change, which make adaptation necessary, developed countries have a duty to assist developing countries that have contributed or currently contribute significantly less to climate change. On this account, the quantity of past and current emissions for which countries are responsible decides the way in which responsibilities for adaptation have to be differentiated. This argument, however, disguises the goal of adaptation measures. It emphasizes the idea that polluters should pay for their emissions but ignores the fact that adaptation is meant to enable vulnerable countries or communities to cope with the adverse effects of climate change, which cannot be prevented by mitigation.⁵ There are two reasons why this is problematic.

First, the goal of adaptation is different from that of mitigation.⁶ Whilst in the case of mitigation it makes perfect sense to differentiate responsibilities according to emissions, this is less convincing in the case of adaptation. It makes sense to differentiate responsibilities for mitigation regarding differences in emissions because the goal of mitigation policy is to prevent dangerous climate change by ensuring that an emission budget is not exceeded. Remaining within an emission budget is necessary to keep the rise of global mean temperature below a certain level. In global climate politics, the 2°C threshold has become prominent, because more warming than this would lead to dangerous climate change. Hence, holding countries responsible for their emissions means holding them responsible for their contribution to the overall goal of preventing dangerous climate change. Furthermore, in many cases those countries emitting more are also better able to reduce their emissions. High-emitting countries both typically possess the technological knowledge necessary to reduce their emissions most efficiently and are better able to do so effectively. This effectiveness is because high-emitting countries can often reduce so-called “luxury emissions” but do not have to reduce the emissions necessary to secure subsistence for their citizens.⁷

In the case of climate change adaptation, by contrast, the goal is different. Adaptation measures are not meant to avoid dangerous climate change by reducing emissions. Rather, adaptation to climate change aims at coping with the threat of climate impacts. For instance, building seawalls prevents or at least minimizes the risk of negative climate impacts. In the case of adaptation, the object of responsibility is different; what matters here are not emissions but subsidizing, implementing, and maintaining appropriate adaptation measures where human beings and natural systems are under threat of climate impacts. Moreover, subsidizing adaptation is more efficient if those who assist already possess appropriate scientific and managerial knowledge. Similarly, adaptation is more effective if those implementing adaptation measures are also able to maintain them for longer periods. Thus, the capacity to subsidize, implement, and maintain adaptation is more relevant to differentiating responsibilities for climate change adaptation than differences in emissions. However, it is important to note that such a differentiation is more plausible if it not only captures capacity for financial support but also for transfer of knowledge and technology.

Second, there is also an ethical argument why the capacity to subsidize adaptation is more relevant to differentiating responsibilities for climate change adaptation than emissions. Responsibilities for emissions are significantly limited. Responsibilities for emissions can be ascribed to man-made emissions but not to those caused naturally. Natural climate variability is not man-made, so human communities, including countries, cannot be responsible for it. Hence, if responsibilities for climate change adaptation are differentiated according to the quantity of emissions, then the scope of these responsibilities is restricted to climate impacts which are anthropogenic.⁸ This means that countries would only be responsible for subsidizing adaptation measures if climate impacts were not merely observed but also attributable to anthropogenic climate change.⁹ Countries and communities vulnerable to impacts due solely to natural climate variability would not be owed assistance. From an ethical point of view, this seems to be erroneous. If human beings face a severe threat they cannot cope with by themselves, they are owed assistance, irrespective of its cause.

To be sure, one could counter this argument by saying that, although duties of assistance in cases of natural climate variability exist, they should not be dealt with under the CAF, since the CAF is only concerned with anthropogenic climate change. This critique certainly bears some relevance, but it oversimplifies matters. Anthropogenic climate change is only one of the causes of vulnerability to negative climate effects. Detecting that a country or a community needs to adapt to climate change is one thing, but attributing this need to

anthropogenic climate change is quite another. This is not only because detection and attribution (D&A) research is not able to attribute all hazardous weather events and slow-onset events caused by changing climatic conditions to anthropogenic emissions. The vulnerability of countries and communities is also increased by socio-economic disadvantage, which is not caused by climate change at all.¹⁰

Since in many cases adaptation measures have to be taken today, it would be problematic to wait until D&A research has proven which fraction of climate variability can be distinctively attributed to human emissions. Waiting that long would mean that it is often too late for a country or community to cope with climate impacts by adapting and that they have to face loss and damage which could have been prevented. Moreover, since vulnerability to climate impacts due to socio-economic disadvantage is not caused by climate change, differentiating responsibilities for adaptation according to emissions would not take these disadvantages into account. It would secure measures relative to the magnitude of anthropogenic climate impacts but not in accordance with socio-economic deprivation.¹¹

From an ethical point of view, this approach appears to be devastating, because those vulnerable to climate impacts due to socio-economic disadvantage would be left without appropriately differentiated assistance. Both natural climate variability and socio-economic disadvantage play their most significant roles in developing countries and communities which are not able to cope with climate impacts on their own.¹² Thus, if we believe that those in need are first and foremost owed assistance simply because they need it, rather than trying to differentiate responsibilities according to emissions, ethically speaking it is more appropriate to see which countries and communities are best able to subsidize, and help implement, and maintain adaptation measures irrespective of how much they have contributed to anthropogenic climate change.

Both arguments provided in this section suggest that, with climate change adaptation, the object of responsibility should not be emissions. To secure an ethically appropriate, efficient, and effective distribution of responsibilities for adaptation, it is more plausible to differentiate responsibilities by the different capacities of countries and communities to subsidize, implement, and maintain adaptation measures. Moreover, so as not to leave those most in need of assistance without help, the object of responsibility for climate change adaptation should not be limited to anthropogenic climate impacts. Those capable of subsidizing, implementing, and maintaining adaptation should be deemed responsible for helping those who are not able to cope with the adverse effects of climate change on their

own, irrespective of whether climate impacts are anthropogenic or due to natural climate variability.

2. Who Is Responsible for Adaptation?

According to the argument in the previous section, a crucial distinction between mitigation and adaptation is between the different objects of responsibility they cover. Responsibility for mitigation concerns emissions because the goal of mitigation is to keep global warming below the 2°C threshold. Responsibilities for mitigation, therefore, can plausibly be differentiated according to differences in emissions. Responsibilities for adaptation, by contrast, concern subsidizing, implementing, and maintaining adaptation measures. In consequence, the object of responsibility for adaptation is more plausibly the burdens of securing adaptation.

However, to infer from this conclusion that responsibilities for adaptation should simply be ascribed to developed countries according to their different capacities to subsidize, and help implement, and maintain adaptation is too quick. First, such an inference does not take into account the fact that the parties to the UNFCCC in 2013 established the Warsaw International Mechanism (WIM) “to address loss and damage associated with impacts of climate change [...]”.¹³ Second, such an inference ignores the fact that, in the long run, implementation and maintenance of adaptation measures are most efficient and effective if the governments and in many cases local communities concerned are suitably involved as responsible agents. This section considers both these claims and reformulates the objectives of responsibilities for adaptation accordingly.

First, at their 19th conference in Warsaw (COP 19) the parties to the UNFCCC established the WIM under the CAF, “acknowledging that loss and damage associated with the adverse effects of climate change includes, and in some cases involves more than, that which can be reduced by adaptation, [...]”.¹⁴ In accordance with the loss and damage (L&D) literature, this acknowledgement states that at least some of the adverse effects of climate change cannot be addressed by “adaptation” measures.¹⁵ Hence, according to this political decision there is a difference in the objectives of responsibility when “adaptation” is concerned and when L&D is at issue. This makes it necessary to find a distinct way to distinguish responsibilities for “adaptation” from those for L&D. But since both “adaptation” in the sense of the 2/CP.19 decision and L&D currently figure under the umbrella of the CAF, both kinds of responsibilities can be seen as relevant for differentiating responsibilities for

adaptation in a broader sense. Hence, adaptation in the CAF seems to be understood as a wider concept than in the 2/CP.19 decision.

However, it is not an easy task to distinguish between “adaptation” and L&D. One conception which can help to draw such a distinction has been proposed by Dow et al.¹⁶ According to them, the limits of “adaptation” are reached when climate risks become intolerable. The object of responsibility in the case of “adaptation” is the implementation and maintenance of measures perceived as having the potential to keep climate risks within a range of acceptable or tolerable risk, for example when dykes are built because they are believed to allow a community to cope with high river flow or sea-level rise. The object of responsibility with regard to L&D is different. L&D measures must enable countries or communities to deal with intolerable risks of climate impacts. Such measures include, for example, early warning systems deemed to minimize the number of deaths instead of keeping the risk of deaths within an acceptable or tolerable range. They also include measures allowing a community to fairly compensate victims of L&D.

This paper cannot provide a full justification for why it is appropriate to distinguish between “adaptation” and L&D along the lines proposed by Dow et al., and neither can it elaborate on the ethical implications of this distinction.¹⁷ But since the WIM falls within the scope of the CAF, and if claims in L&D literature are taken seriously, then differentiating responsibilities for adaptation also involves considering the distinction between adaptation and L&D. In the case of “adaptation”, the object is the burdens of keeping risks of climate impacts within an acceptable or tolerable range. With L&D, the object of responsibility is the burdens of realizing measures suitable for dealing with intolerable risks of climate impacts.

In light of the different objectives of responsibilities for “adaptation” and L&D, a more fine-grained ascription of responsibilities for adaptation (in the broader sense of the term) is possible. Regarding acceptable and tolerable risks, it seems plausible that countries which command better knowledge and technology in such matters have a greater responsibility to subsidize, help implement, and maintain the respective measures. By contrast, the scientific, managerial, and technological capacity to deal with intolerable risks of climate impacts increases the responsibility to subsidize, implement, and maintain L&D measures. In consequence, distinguishing between acceptable, tolerable and intolerable risks of climate impacts allows the differentiation between responsibilities to contribute knowledge, management, and technology to one or the other category of measures.

However, attributing responsibility with regard to “adaptation” or L&D measures in the way just proposed tends to charge developed countries with subsidizing adaptation and ignores the fact that the parties to the CAF decided to build resilience and enhance knowledge mainly *in* and not *for* the countries and communities most vulnerable to the adverse effects of climate change.¹⁸ Taking this goal into account leads to further differentiations of responsibilities and changes what assistance appropriate for climate change adaptation from developed countries would mean. Assistance should not be limited to fostering adaptation in vulnerable countries but should also enable the governments and community leaders of these countries to take responsibility for adaptation in their regions of concern. Hence, these governments and leaders need to be provided with knowledge, understanding, technology, and resources so that they and their scientific and managerial staff are able to implement and maintain appropriate adaptation measures.

Small Island Developing States (SIDS) are a telling example for illustrating the case. Because of their geographic conditions, SIDS societies are traditionally used to adapt to varying weather conditions. However, recent empirical research shows that little progress has been made towards appropriate climate change adaptation in SIDS.¹⁹ Why is this the case?

First, in many SIDS, people, governments and community leaders lack appropriate knowledge and understanding concerning climate change. And even if there is knowledge and understanding about climate change, climate change is not perceived as a threat but rather as something foreign and distant.²⁰ Second, although both these challenges not only concern SIDS but also developed countries, they are more significant in the former, because institutional structures tend to be weak and privilege local leaders rather than central governments. These conditions in SIDS tend to render subsidies for adaptation inefficient, because those who could most efficiently implement adaptation measures have insufficient knowledge and understanding about climate change or tend to see it as a foreign concept not concerning their countries and communities.²¹

Third, lack of knowledge and appropriate institutional conditions in SIDS tend to render adaptation measures inefficient. The latter are often implemented with donor money. This means that priorities for adaptation are often set by donors as well. Moreover, governments applying for donor money tend to propose the adaptation projects that are most likely to be funded instead of setting their own priorities. As a consequence, adaptation becomes ineffective, either because measures protect infrastructure and coasts inappropriately or because measures lead to more severe impacts elsewhere. Furthermore, SIDS societies may

lack resources for maintaining adaptation measures when they are no longer subsidized by donors. Hence local communities may be left as vulnerable as before, or even more vulnerable.²²

Generalizing, these empirical findings from SIDS allow the conclusion that assistance in adaptation tends to be inefficient if it is not accompanied by suitable education and training of governments and local political leaders as well as a strengthening of decision structures.²³ Furthermore, adaptation tends to become ineffective if vulnerable countries and communities are not involved in decisions concerning which measures have to be implemented and where.²⁴ And when measures are implemented, adaptation is more effective if governments and community leaders are able to maintain these measures themselves.²⁵ Hence, in line with most invitations in § 14 of the CAF, these observations suggest that the object of responsibility of developed countries concerning adaptation should not be limited to subsidizing adaptation by transferring knowledge, managerial competence, and technology *for* developing countries. For adaptation to be efficient and effective, the object of responsibility includes fostering appropriate competence and decision structures *in* developing countries as well.

This means that responsibilities for adaptation should be further differentiated among developed countries depending on how well they are suited to support appropriate decision structures and programs for competence building *in* developing countries. The goal must be to enable vulnerable countries and communities to take responsibility for their own adaptation. Therefore, differentiating responsibilities for adaptation not only concerns developed countries but also developing countries and communities vulnerable to climate change impacts. It is these countries that should be deemed responsible for implementation and maintenance of adaptation measures once the competences and decision structures needed are available or have been built. The example of SIDS suggests that enabling developing countries to take responsibility for implementation and maintenance of adaptation measures is necessary to secure efficient and effective adaptation.

3. Answerable for Adaptation to What Institutions?

According to the argument in the previous section, responsibilities for adaptation include both developed and developing countries. The object of responsibility of developed countries is not only to provide knowledge, managerial competence, and technology *for* developing countries, differentiated by the risks of climate impacts and capacities of developed countries to

subsidize assistance. Developed countries are also responsible for helping establish decision structures and for training and nurturing competence for adaptation *in* developing countries, the goal being to enable developing countries to implement and maintain adaptation measures on their own. Depending on the strength of decision structures and competence available or built *in* developing countries, these countries should be deemed responsible for their own adaptation. Turning now to the third aspect of responsibility as a fourfold concept, the answerability to an institution, makes it necessary to consider to which institutions the subjects of responsibility for adaptation identified so far are and should be answerable.

With the CAF, the COP in Cancun established the Adaptation Committee (AC) “to promote the implementation of enhanced action on adaptation in a coherent manner [...]”.²⁶ The main purpose of the AC is to gather information on needs concerning adaptation, to provide support and guidance, and to ensure availability of information to make adaptation efforts more efficient and effective. The AC is answerable to the COP, whilst all parties to the UNFCCC are invited to supply information about support provided or needed. In this sense, all the subjects of responsibility for adaptation identified in the previous section are answerable to the AC, since they are invited to report either the adaptation action taken or the assistance needed for adaptation. However, the AC has a mainly coordinative function and, as no other body of the COP relevant for adaptation, it has any coercive power. The agents bearing responsibility for adaptation, therefore, are not answerable to the AC in the usual sense. The AC can neither enforce the responsibilities of developed countries to subsidize adaptation nor demand from developing countries that they fulfill their responsibilities for implementation and maintenance of adaptation measures.

Since neither the AC nor any other body of the COP relevant for adaptation have coercive power, this situation potentially leads to three kinds of disadvantage for developing countries in need of assistance for adaptation. First, countries and communities within which knowledge and understanding about climate change are insufficient may not voice their needs with regard to adaptation appropriately. Second, if decision structures are weak in countries in need of assistance for adaptation, decisions about where and how adaptation measures should be implemented will still very much depend on the interests of donors subsidizing adaptation. Third, even if these challenges can be met, whether or not adaptation can be subsidized depends on the disposition of the countries responsible for assistance to fulfill their financial responsibilities. Telling in this respect are the funds for adaptation finance. Although US\$ 100 billion a year by 2020 were pledged for adaptation at Copenhagen in 2009, it is reasonable to

doubt whether this money will ever be effectively paid or whether donor countries will simply relabel foreign assistance payments as adaptation finance.²⁷

To address the first kind of disadvantage, insufficient knowledge and understanding about climate change, it is important to develop the appropriate competences in developing countries. In this respect, the function of the AC to strengthen, consolidate and enhance “the sharing of relevant information, knowledge, experience and good practices, at the local, national, regional and international levels [...]” becomes extremely important.²⁸ However, sharing of information is not enough if knowledge and understanding is only shared between organizations, centers, and networks promoting adaptation *for* developing countries. For appropriate assessment of adaptation needs, it is important that knowledge and understanding about climate change reaches all relevant actors with decisional power *in* countries and communities. Those facing risks of climate impacts are better able to appropriately evaluate whether a risk is acceptable, tolerable, or intolerable. How climate risks are evaluated depends not only on scientific findings and the adaptive capacity of communities but, significantly, also on how they are perceived by those facing these risks.²⁹

In consequence, competence building in developing countries is of high priority. This not only holds because otherwise countries in need of assistance would not be able to advance their claims for assistance appropriately. As argued in the previous section, it is also important because efficient and effective adaptation is more probable when local conditions are thoroughly taken into account. This not only makes knowledge and understanding about climate change a necessary condition; for effective and efficient adaptation, appropriate and functioning decision structures are crucial too. Moreover, these decision structures need to enable communities and even individuals facing climate risks to voice their perceptions of these risks. Without appropriate channels to voice these perceptions, it is most likely that inappropriate adaptation measures are implemented.

However, even if both these disadvantages can be overcome, it is still necessary that appropriate finance for adaptation is available. Since the adaptation funds of the COP barely meet the pledges given by developed countries, the third disadvantage is the greatest challenge for efficient and effective adaptation, especially because, according to findings by the World Bank in 2010, far more finance is needed than the annual US\$ 100 billion already pledged by developed countries.³⁰ Adaptation finance is the greatest of the challenges, for three reasons. First, whilst the first two challenges can be met with the help of NGOs stepping in for developed countries, these organizations will by no means be able to raise enough

finance to ensure appropriate implementation and maintenance of adaptation measures. Second, within the current climate regime, developing countries fully depend on the willingness of developed countries to fulfill their financial responsibilities. The adaptation funding institutions of the COP have no coercive power to make developed countries live up to their pledges. Furthermore, as the example of Canada has shown, if financial burdens become inconvenient, developed countries have a legal right and use this right to opt out of climate agreements.³¹

To overcome this third disadvantage for developing countries, it is necessary to consider whether there is or should be institutions to force developed countries to meet their financial responsibilities. Due to the legal structure of the COP, granting its adaptation bodies coercive power seems to be unfeasible. In the end, since all these bodies are answerable to the COP, they are answerable to all parties of the UNFCCC, among them being developed countries, which have a legal right to opt out of any agreement. However, since all countries are bound by international and domestic law, another way to make developed countries answerable could be institutions of international and domestic law. As discussed by legal scholars, developing institutions of international and domestic law so as to enable those under threat of climate impacts to file suits for assistance could be an appropriate tool for securing adaptation assistance for developing countries, but also any other community and individuals facing risks of climate impacts.³²

However, in contrast to international and domestic law suits already filed by plaintiffs facing climate impacts, according to the argument in this paper, they should not file suits against countries, governments, and community leaders for causing or contributing by their decisions to these impacts. Rather, developed countries should be sued for not meeting their differentiated responsibilities for adaptation. In the case of adaptation, the governments and leaders of both developed and developing countries should be made answerable for not appropriately contributing to the subsidizing, implementing, and maintaining of adaptation measures, where they are needed. According to the differentiations of responsibilities argued for in the previous section, developed countries have different responsibilities according to their capacities either to subsidize “adaptation” and L&D measures or to foster programs for competence building and appropriate decision structures in developing countries. At the same time, as was shown before, depending on their decision structures and competences, developing countries and their communities should be deemed responsible for implementation and maintenance of adaptation measures. In consequence, it should not only be possible for

developing countries to file suits against developed countries but also for communities and individuals of developing as well as developed countries facing climate risks to sue their own governments and leaders for ineffective and inefficient adaptation action.

4. Responsible According to What Norm?

The argument of this paper is based on an understanding of responsibility as a fourfold concept, which allows a differentiation of the responsibilities for adaptation; someone (i. the subject of responsibility) is always responsible for something (ii. the object of responsibility), answerable to some institution (iii.), and held accountable to a norm (iv.). Thus far, the paper has argued that the appropriate object of responsibility in the case of climate change adaptation is the burdens to be shared for effective and efficient adaptation. For effective and efficient adaptation, however, subjects of responsibility should not only include developed countries subsidizing adaptation. If appropriate competence and decision structures are given in developing countries, these countries should be deemed responsible for their own adaptation as well. To secure these responsibilities, developing countries, communities, and individuals facing climate risks should be enabled to file suits against countries, governments, and community leaders who are deemed responsible for a specific aspect of adaptation.

Turning now to the fourth aspect of responsibility, it remains to be seen exactly what norms the various subjects of responsibility for adaptation should be accountable to. This poses a challenge to the methodology used for the argument in this paper. To say that someone is responsible for something does not imply that the way he or she acts or behaves is blameworthy or not. For this, a norm has to be justified independently of the concept of responsibility. As Bayertz convincingly argued, the concept of responsibility does not found ethical evaluations, but carries them.³³ This is a significant challenge for debates focusing on responsibilities for adaptation, since from an ethical point of view one would like not only to understand how responsibilities can be differentiated but also to know the norms on the basis of which it is possible to blame countries, governments and community leaders for not fulfilling their responsibilities.³⁴

Disregarding this challenge, however, the argument in this paper would suggest that ability-to-pay principles are better suited as norms for evaluating responsible action for adaptation than polluter-pays principles, because in the case of adaptation the object of responsibility is the burdens to be shared but not the emissions causing the need to adapt. Ability-to-pay principles hold that countries, governments, and community leaders should be

blamed if they do not meet their responsibilities even though they would be able to do so. According to the argument in this paper, what it means to be able to carry the burdens of adaptation depends on the ascription of responsibilities differentiated as shown in the table below.

	Subsidize	Implement	Maintain
Developed Countries	Provide knowledge, technology and finance for... A.) ... measures for “adaptation” B.) ... approaches to L&D	Foster programs to... C.) ... strengthen decision structures D.) ... build competences needed for efficient and effective implementation.	Foster programs to... E.) ... strengthen decision structures F.) ... build competences needed for sustainable maintenance of measures.
Developing Countries		Given C.) & D.): implement “adaptation” and L&D measures	Given E.) & F.): maintain “adaptation” and L&D measures

Indeed, to argue that ability-to-pay principles alone allow countries, governments, and community leaders to be blamed for not meeting their responsibilities for adaptation would once again simplify matters. Currently, the UNFCCC only distinguishes between Annex I and Non-Annex I countries and between developed and developing countries, the latter comprising Least Developed Countries (LDC) and nearly all SIDS as subcategories.³⁵ None of these categories are differentiated according to the capacities to adapt. The relevant criteria to distinguish these countries according to these categories are differences in socio-economic development. Thus, these differences alone do not suffice to ascribe the different responsibilities for adaptation. Also, information about the capacities of countries to subsidize, implement, and maintain adaptation is needed.

Before such a categorization of countries is agreed, it is difficult if not impossible for developing countries, communities, and individuals facing risks of climate impacts to legally enforce their claims for adaptation assistance. Thus, as long as it remains unclear which countries, governments, and community leaders can be deemed responsible for what aspect of adaptation, it is unclear which countries, governments and community leaders to target with regard to which unmet responsibilities. This line of argument suggests that, before any such

agreement about how to categorize countries with regard to their different responsibilities for adaptation is reached, polluter-pays principles are still a practicable and even very much needed rule of thumb to ensure enhanced action on adaptation. Since the concept of responsibility only carries but does not found ethical norms to evaluate action, this would be a pragmatic argument for why polluter-pays principles should not be dismissed altogether.

However, even though it seems highly plausible that developed countries should be deemed responsible for assisting developing countries in adaptation, because developed countries have contributed significantly more to the urgency of adaptation and possess better knowledge, competence, and technology to assist in adaptation in developing countries, there are reasons why developing countries should also assist each other. For reasons of geography and shared experience and culture concerning good practice in adaptation, it might be the case for some developing countries that they should assist other developing countries as well. Differentiating these responsibilities among developing countries, however, requires a categorization of capacities to assist, which neither follows the categorization suggested in this paper nor corresponds to the manner in which the UNFCCC distinguishes between the subcategories of developing countries.

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¹ UNFCCC, *Report of the Conference of the Parties on its sixteenth session, held in Cancun from 29 November to 10 December 2010*, 2011, §11.

² UNFCCC (footnote 1), UNFCCC (footnote 1), §18.

³ Kurt Bayertz, Eine kurze Geschichte der Herkunft der Verantwortung, in: *Verantwortung*, ed. Kurt Bayertz, 1995, 3–71

⁴ UNFCCC (footnote 1), §14.

⁵ Note that, in normative literature especially, arguments in favor of the polluter-pays-principle usually do not distinguish between mitigation and adaptation as two different policy goals which might comprise different objects of responsibility (For a collection of essential essays on the polluter-pays principle see Stephen M. Gardiner / Simon Caney / Dale Jamieson / Henry Shue (Ed.), *Climate Ethics*, 2010). As the argument of this paper shows this is a significant neglect.

⁶ An important source of the argument in this section is provided by the conceptual analysis of Christian Seidel, *Klimawandel, globale Gerechtigkeit und die Ethik globaler öffentlicher Güter - einige grundlegende begriffliche Fragen*, in: *Globale öffentliche Güter in interdisziplinären Perspektiven*, ed. Matthias Maring, 2012, 179–196.

⁷ The distinction between subsistence emissions and luxury emissions referred to here has been introduced by Henry Shue, *Subsistence Emissions and Luxury Emissions*, in *Climate Ethics*, ed. Stephen M. Gardiner / Simon Caney / Dale Jamieson / Henry Shue, 2010, 200–214.

⁸ Christian Huggel / Dáithí Stone / Maximilian Auffhammer / Gerrit Hansen, *Loss and Damage Attribution*, *Nature Climate Change* 5 (2013), 694–696

⁹ M. Hulme, *Attributing weather extremes to 'climate change': A review*, *Progress in Physical Geography* 38 (2014), 499–511

¹⁰ Dáithí Stone / Maximilian Auffhammer / Mark Carey / Gerrit Hansen / Christian Huggel / Wolfgang Cramer / David Lobell / Ulf Molau / Andrew Solow / Lourdes Tibig / Gary Yohe, *The challenge to detect and attribute effects of climate change on human and natural systems*, *Climatic Change* 121 (2013), 381–395

¹¹ Hans Visser / Arthur C. Petersen / Willem Ligtoet, *On the relation between weather-related disaster impacts, vulnerability and climate change*, *Climatic Change* 125 (2014), 461–477

¹² E.g. Robin Bronen, *Climate-Induced Displacement of Alaska Native Communities*, 2013; N. Hoyos / J. Escobar / J. C. Restrepo / A. M. Arango / J. C. Ortiz, *Impact of the 2010–2011 La Niña phenomenon in Colombia, South America: The human toll of an extreme weather event*, *Applied Geography* 39 (2013), 16–25; Koko Warner / Geest, Kees van der, *Loss and damage from climate change: Local-level evidence from nine vulnerable countries*, *International Journal of Global Warming* 5 (2013), 367–386

¹³ UNFCCC, *Report of the Conference of the Parties on its nineteenth session, held in Warsaw from 11 to 23 November 2013*, 2014, 2/CP.19.

¹⁴ *ibid.*

¹⁵ I use inverted commas here to highlight that “adaptation” in the sense of the 2/CP.19 decision is different from adaptation the way it is understood within the argument of this paper as a whole. The argument presumes that both “adaptation” measures in the sense of the 2/CP.19 decision and L&D approaches are subsumed under the umbrella of the CAF and are in this sense both instances of adaptation in a broader sense.

For two examples of relevant L&D literature see Ainun Nishat / Nandan Mukherjee / Erin Roberts / Anna Hasemann, *A Range of Approaches to Address Loss and Damage from Climate Change Impacts in Bangladesh*. <http://www.loss-and-damage.net/4825>, 03.09.2014; Warner / Geest, Kees van der (footnote 12)

¹⁶ Kirstin Dow / Frans Berkhout / Benjamin L. Preston / Richard J.T. Klein / Guy Midgley / M. Rebecca Shaw, *Limits to Adaptation*, *Nature Climate Change* 3 (2013), 305–307

¹⁷ For a more detailed justification of this distinction and discussion of its ethical implications see Ivo Wallimann-Helmer, *Justice for Climate Loss and Damage*, *Climatic Change* (forthcoming) and Alice Kaswan, *Climate Change Adaptation and Theories of Justice*, *Archiv für Rechts- und Sozialphilosophie* (this issue), Sect. 2.1.

¹⁸ UNFCCC (footnote 1), §11.

¹⁹ For a helpful literature review concerning obstacles for appropriate adaptation in SIDS see Carola Betzold, *Adapting to climate change in small island developing states*, *Climatic Change* (2015). The observations and arguments that follow are based on her analysis.

²⁰ Betzold (footnote 19), Section 4.1.

²¹ Betzold (footnote 19), Section 4.2.

²² Betzold (footnote 19), Section 4.3.

²³ For more empirical data justifying this generalization see Kaswan (footnote 17), Sect. 1.

²⁴ For a more detailed discussion of the importance to involve countries and communities in decision-making about adaptation see Kaswan (footnote 17), Sect. 4.

²⁵ To be sure, these conclusions are not original but very much in line with research on development aid in general. I would like to thank Carola Betzold mentioning this observation.

²⁶ UNFCCC (footnote 1), §20.

²⁷ Mizan R. Khan / J. Timmons Roberts, *Adaptation and international climate policy*, *WIREs Clim Change* 4 (2013), 171–189

²⁸ UNFCCC (footnote 1), §20.

²⁹ Dow / Berkhout / Preston / Klein / Midgley / Shaw (footnote 16)

³⁰ World Bank, *The Costs to Developing Countries of Adapting to Climate Change*, 2010

³¹ Media Relations Environment Canada, Statement by Minister Kent.

<http://www.ec.gc.ca/default.asp?lang=En&n=FFE36B6D-1&news=6B04014B-54FC-4739-B22C-F9CD9A840800>, 09.06.2015

³² E.g. David A. Grossmann, *Warming Up to A not so Radical Idea: Tort-Based Climate Change Litigation*, *Columbia Journal of Environmental Law* 28 (2003), 1–61; Richard S.J. Tol / Roda Verheyen, *State Responsibility and Compensation for Climate Change Damages—a Legal and Economic Assessment*, *Energy*

Policy 32 (2004), 1109–1130; Daniel A. Farber, The Case for Climate Compensation: Justice for Climate Change Victims in a Complex World, *Utah Law Review* (2008); Gabriela Blum / Natalie J. Lockwood, Earthquakes and Wars: The Logic of International Reparations, *Public Law & Legal Theory Working Paper Series* (2012)

³³ Bayertz (footnote 3)

³⁴ For an assessment of different theories of justice and responsibility to justify such norms see Kaswan (footnote 17), Sect. 3.

³⁵ Note that not all SIDS are developing countries. For example, although Singapore is a SIDS, it is not a developing country but a Non-Annex I country.